Notice of Allowability	Application No.	Applicant(s)	
	09/282,425	NAGASE ET AL.	
	Examiner	Art Unit	
	Herng-der Day	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendment received 11/12/04, and 11/22/04*.

2. ☒ The allowed claim(s) is/are *1-5, 11-15, 28-31, 33-71, now renumbered as 1-53*.

3. ☒ The drawings filed on *20 April 2004* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *11222004* .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER

DETAILED ACTION

1. This communication is in response to Applicants' Amendment to Office Action dated August 11, 2004, mailed November 12, 2004, and Applicants' Supplemental Amendment faxed November 22, 2004.

1-1. In the above-mentioned Amendment and Supplemental Amendment, claims 4, 31, 33, 37, 50, and 61 have been amended. Claims 1-5, 11-15, 28-31, and 33-71 are pending.

1-2. Claims 1-5, 11-15, 28-31, and 33-71 have been examined and allowed.

Reasons for Allowance

2. The following is an Examiner's statement of reasons for allowance:

2-1. The closest prior art of record discloses:

(1) A simulation apparatus for electromagnetic field intensity using moment method (Otsu et al., U.S. Patent 5,903,477).

(2) An algorithm using moment method such that the induced current can be extrapolated to a broad band of frequencies (Wang et al., "A Frequency Extrapolation Algorithm for FISC"); and

(3) A method of solving simultaneous linear equations using an LU decomposition method (Nakanishi, U.S. Patent 5,887,186).

2-2. Independent claim 1 is directed at an apparatus for calculating immunity from a radiated electromagnetic field as shown in Fig. 1A. This independent claim identifies the distinct combination of features of "a first calculating unit setting a representative frequency

representative of the carrier wave frequency, representative of the upper sideband frequency, and representative of the lower sideband frequency, and calculating, among elements at the set representative frequency, the single common mutual impedance" and "a second calculating unit solving a single system of simultaneous equations under the moment method having the single common mutual impedance calculated by the first calculating unit to calculate a total electric current flowing through the electronic apparatus", which has not been uncovered in a single teaching, nor would a modification of prior art references be obvious to one of ordinary skill in the art to yield these limitations in the context of the claim. Claim 1 is deemed allowable.

Dependent claims 2, 11, and 12 are allowable as they depend on the allowed independent claim 1.

2-3. Independent claim 3 is directed at an apparatus for calculating immunity from a radiated electromagnetic field as shown in Fig. 1B. This independent claim identifies the distinct combination of features of "a first calculating unit setting a representative frequency and calculating the single mutual impedance among elements at that representative frequency", "a second calculating unit solving a single system of simultaneous equations under the moment method to calculate the electric current", and "a third calculating unit calculating the electric currents, other than the electric current calculated by the second calculating unit, by using a proportional relation and applying the proportional relation to a value of a component of the wave source of the antenna at the frequency other than the above frequency for which the second calculating unit calculated the above electric current", which has not been uncovered in a single teaching, nor would a modification of prior art references be obvious to one of ordinary skill in the art to yield these limitations in the context of the claim. Claim 3 is deemed allowable.

Dependent claim 13 is allowable as it depends on the allowed independent claim 3.

2-4. Independent claim 4 is directed at an apparatus for calculating immunity from a radiated electromagnetic field as shown in Fig. 1C. This independent claim identifies the distinct combination of features of "a first calculating unit setting a representative frequency and calculating the mutual impedance among elements at that representative frequency", "a second calculating unit solving simultaneous equations under the moment method to calculate the electric current", "a third calculating unit solving the simultaneous equations under the moment method for one of the frequencies not used in the calculation by the second calculating unit to calculate the electric current", and "a fourth calculating unit calculating the electric current, other than the electric currents calculated by the second and third calculating unit, by proportional operations", which has not been uncovered in a single teaching, nor would a modification of prior art references be obvious to one of ordinary skill in the art to yield these limitations in the context of the claim. Claim 4 is deemed allowable.

Dependent claims 5, 14, and 15 are allowable as they depend on the allowed independent claim 4.

2-5. Independent claim 28 is the equivalent method claim of the allowed apparatus claim 3. Therefore, claim 28 is deemed allowable for the same reason of claim 3.

2-6. Independent claim 29 is the equivalent method claim of the allowed apparatus claim 1. Therefore, claim 29 is deemed allowable for the same reason of claim 1.

2-7. Independent claim 30 is the equivalent medium claim of the allowed apparatus claim 3. Therefore, claim 30 is deemed allowable for the same reason of claim 3.

2-8. Independent claim 31 is the equivalent medium claim of the allowed apparatus claim 4. Therefore, claim 31 is deemed allowable for the same reason of claim 4.

2-9. Independent claim 33 is directed at an apparatus for calculating immunity from a radiated electromagnetic field as shown in Fig. 1A, Fig. 9, and Fig. 10. This independent claim identifies the distinct combination of features of "a first calculating means for setting a representative frequency representative of a carrier wave frequency, representative of the upper sideband frequency, and representative of the lower sideband frequency, and calculating, among elements at the set representative frequency, the single common mutual impedance" and "a second calculating means for solving a single system of simultaneous equations under the moment method having the single common mutual impedance calculated by the first calculating means to calculate a total electric current flowing through the electronic apparatus", which has not been uncovered in a single teaching, nor would a modification of prior art references be obvious to one of ordinary skill in the art to yield these limitations in the context of the claim. Claim 33 is deemed allowable.

Dependent claims 39-49 are allowable as they depend on the allowed independent claim 33.

2-10. Independent claim 34 is directed at an apparatus for calculating immunity from a radiated electromagnetic field as shown in Fig. 1B, Fig. 9, and Fig. 10. This independent claim identifies the distinct combination of features of "a first calculating means for setting a representative frequency and calculating the single mutual impedance among elements at that representative frequency", "a second calculating means for solving a single system of simultaneous equations under the moment method to calculate the electric current", and "a third calculating means for

calculating the electric currents, other than the electric current calculated by the second calculating means, by using a proportional relation and applying the proportional relation to a value of a component of the wave source of the antenna at the frequency other than the above frequency for which the second calculating means calculated the above electric current", which has not been uncovered in a single teaching, nor would a modification of prior art references be obvious to one of ordinary skill in the art to yield these limitations in the context of the claim. Claim 34 is deemed allowable.

Dependent claims 50-60 are allowable as they depend on the allowed independent claim 34.

2-11. Independent claim 35 is directed at an apparatus for calculating immunity from a radiated electromagnetic field as shown in Fig. 1C, Fig. 9, and Fig. 10. This independent claim identifies the distinct combination of features of "a first calculating means for setting a representative frequency and calculating the mutual impedance among elements at that representative frequency", "a second calculating means for solving simultaneous equations under the moment method to calculate the electric current", "a third calculating means for calculating the electric currents, other than the electric current calculated by the second calculating means, by proportional operations", and "a fourth calculating means for calculating the electric currents, other than the electric currents calculated by the second and third calculating means, by proportional operations", which has not been uncovered in a single teaching, nor would a modification of prior art references be obvious to one of ordinary skill in the art to yield these limitations in the context of the claim. Claim 35 is deemed allowable.

Dependent claims 61-71 are allowable as they depend on the allowed independent claim 35.

2-12. Independent claim 36 is the equivalent storage claim of the allowed apparatus claim 33. Therefore, claim 36 is deemed allowable for the same reason of claim 33.

2-13. Independent claim 37 is the equivalent storage claim of the allowed apparatus claim 34. Therefore, claim 37 is deemed allowable for the same reason of claim 34.

2-14. Independent claim 38 is the equivalent storage claim of the allowed apparatus claim 35. Therefore, claim 38 is deemed allowable for the same reason of claim 35.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Herng-der Day whose telephone number is (571) 272-3777. The Examiner can normally be reached on 9:00 - 17:30.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Jean Homere can be reached on (571) 272-3780. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Herng-der Day H.D.
November 23, 2004

KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER